RETROSPECTIVE EVALUATION OF FACTORS PREDICTIVE OF HBA1C LEVELS OF CHILDREN AND YOUNG PEOPLE WITH PAEDIATRIC DIABETES ACROSS CTM UHB FROM 2021 TO 2024.

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Introduction

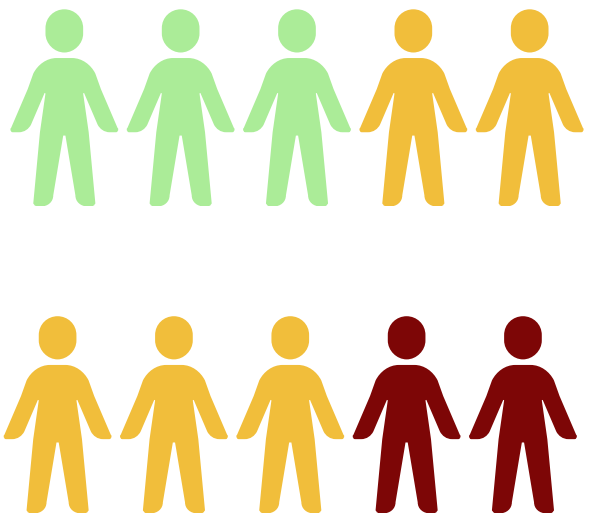
HbA1C provides an indication of average blood glucose levels over a 3 month period and is a widely used measure of Diabetes management. Target HbA1C levels are 48 or below, with values above 68 considered to be 'high'. Higher HbA1C levels are associated with increased risk of medical complications and also risk to life. Measures of HbA1C across England and Wales are annually submitted to the National Paediatric Diabetes Audit for review, with levels known to be currently consistently higher across Wales than England. Recent literature has identified different HbA1C trajectories and highlighted factors which may provide helpful targets for population based interventions to reduce HbA1C levels.

Methodology

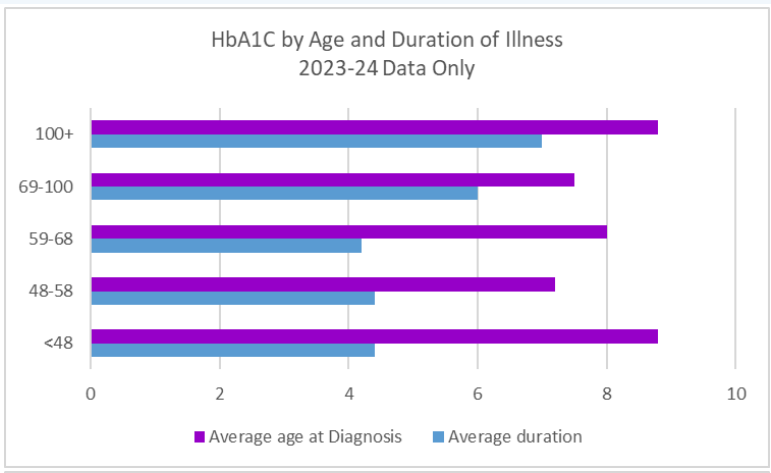
Secondary data analysis using datasets submitted to the NPDA, for the years 2021, 2022 and 2023, representing approximately 300 patients (per year) who provided informed consent to provide anonymous data for evaluation purposes.

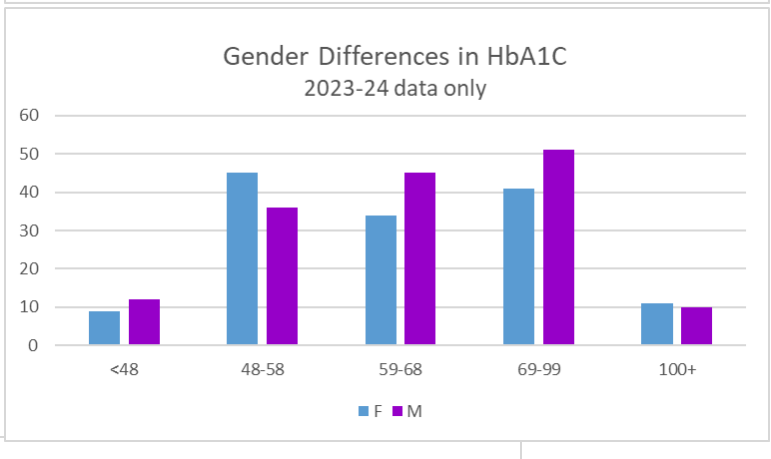
Preliminary analysis (descriptive statistics) will be reported here. Further quantitative analysis to follow, informed by previous findings from the literature, and including biopsychosocial factors as indicated by psychological theory.

Preliminary Results

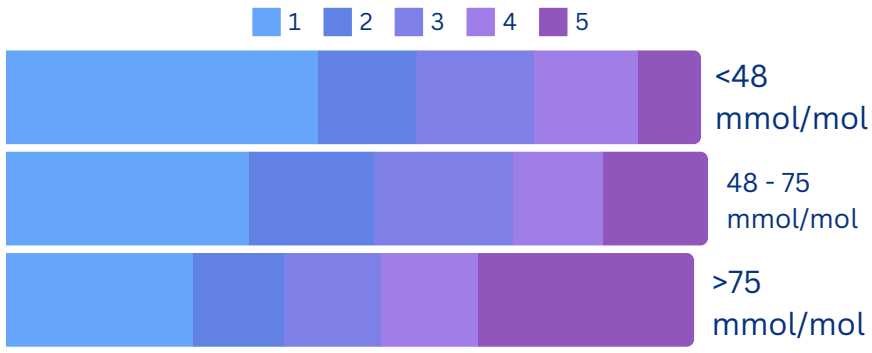


In 23-24 **41% of CYP had a HbA1C within the target range**. This represents an improvement year on year (26% 21-22, 35% 22-23).
However, in 23-24 **33% of CYP had an HbA1C level considered 'high'** with increased risks of medical complications. This is a slight decrease compared with previous years (37% 21-22, 38% 22-23)
Across all years **7% of CYP had extremely high HbA1C of 100+.**
30 patients accessed hospital admission due to diabetes management concerns in 23-24. This was highest in 21-22 (50 patients).

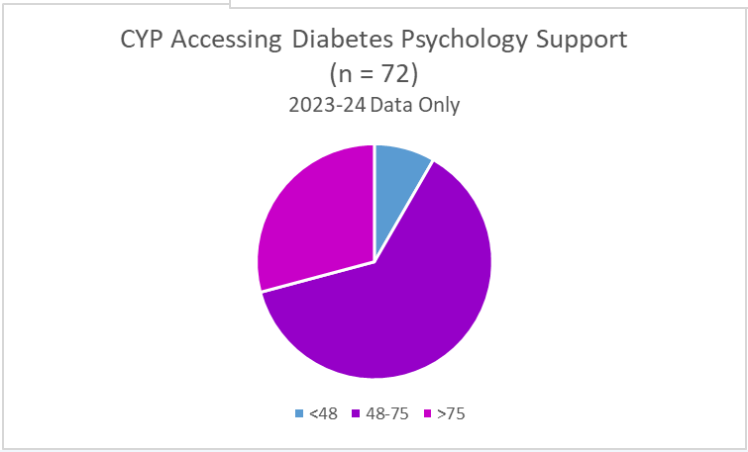




Area deprivation score and HbA1C



*where 1 = least deprived, 5 = most deprived



Next Steps

We will shortly be conducting the next stage of analysis to explore trends identified within literature and how they relate to our data from CTM. We will also be seeking to identify factors which are statistically significantly associated with HbA1C trends and trajectories and will consider how findings can inform targeting of limited resources in future to best meet the needs of our unique population.

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